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1977 CENSUS OF CONSTRUCTION INDUSTRIES

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Industry Series

Preliminary Report

Electrical Work Special Trade Contractors SIC 1731

During 1977, the establishments with payroll in this industry had business receipts of \$14.9 billion. Of this amount, \$14.7 billion were receipts for construction work, an increase of 55 percent compared with 1972. Their payments for construction work subcontracted to others amounted to \$311.0 million leaving net construction receipts of about \$14.4 billion. Total average employment in the industry showed an increase of 13 percent from 1972 to 365.9 thousand employees. Payroll for 1977 amounted to \$5.6 billion. Value added at \$9.0 billion in 1977 was 56 percent more than in 1972.

The Electrical Work Special Trade Contractors industry includes establishments primarily engaged in electrical work at the site. This industry also includes electric heating contractors and establishments engaged in the installation of inter-communication equipment, sound equipment, burglar alarms, fire alarms, and telephones. It does not include establishments primarily engaged in the construction of transmission lines (industry 1623) or electric work carried on in repair shops (group 762). For a more detailed description, see the 1972 SIC Manual.¹

For this census, a "construction establishment" was defined as a relatively permanent office or other place of business at which or from which the usual business activities related to construction were conducted. A separate census report was required from each establishment but not from each construction site. Instead, the data for work at each site were included in the report from the appropriate office or branch office. Foreign construction activities were not included in this census.

The 1977 Census of Construction Industries is the sixth census of construction establishments in the United States. As in previous years, it was conducted jointly with the censuses of

mineral industries, manufactures, retail trade, wholesale trade, and service industries under authority of title 13 of the United States Code. Although the first construction census was conducted covering 1929, only the data from the censuses of 1967 and 1972 are comparable with the 1977 data.

The 1977 estimates for establishments with payroll in all of the construction industries are based on reports from a probability sample of approximately 185,000 establishments selected from about 536,000 construction establishments with payroll. The sample included all construction establishments with a payroll equivalent of 15 or more full-time employees and a sample of those with fewer employees. There were two exceptions: In SIC 1521, sampling was employed in establishments with less than 20 employees because of the large number of establishments in that industry; in SIC 1795, all known establishments were included because of the very small number of establishments in that industry. The data obtained from the sample were inflated to represent all construction establishments with payroll. Complete descriptions of the sampling and estimating procedures will be included in the final reports.

Since the data in this report are based on a sample, they are subject to sampling variability and may be expected to differ from results which would have been obtained if a complete census had been taken using the same schedules and procedures. The standard error shown in the tables is a measure of sampling variability, i.e., the variation that might occur by chance because only a sample of the population was surveyed. As calculated for this report, the standard error partially incorporates the effect of random errors of response, but it does not take into account the effect of any consistent biases due to those types of errors. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are about 95 out of 100 that the difference is less than twice the standard error.

¹ Standard Industrial Classification Manual: 1972. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock No. 4101-0066. Price \$6.75. 1977 Supplement. Stock No. 003-005-00176-0. Price 90 cents.



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Table 1. Detailed Statistics for Establishments With Payroll: 1977, 1972, and 1967

(Thousands of dollars. Detailed figures may not add to totals because of rounding. For meaning of abbreviations and symbols, see text)

Item	Electrical work special trade contractors (1731)			Standard error of estimate (percent)		
	1977	1972	1967	1977	1972	1967
Number of establishments.....	36,809	32,455	26,841	2	2	2
Proprietors and working partners.....	18,507	17,728	18,059	3	3	3
All employees:						
March.....	343,971	302,288	249,944	1	1	1
May.....	361,663	312,731	257,725	1	1	1
August.....	379,332	337,669	276,121	1	1	1
November.....	377,862	330,329	265,854	1	1	1
Average.....	365,929	323,748	264,960	1	1	1
Construction workers:						
March.....	284,141	250,956	211,445	1	1	1
May.....	299,571	260,852	218,823	1	1	1
August.....	317,703	284,762	236,780	1	1	1
November.....	315,834	277,080	226,091	1	1	1
Average.....	304,536	271,441	225,668	1	1	1
Other employees:						
March.....	59,830	51,332	38,530	1	1	1
May.....	62,092	51,879	38,843	1	1	1
August.....	61,629	52,907	39,339	1	1	1
November.....	62,028	53,249	39,675	1	1	1
Average.....	61,477	52,354	39,790	1	1	1
Payroll, all employees.....	5,649,992	3,792,682	2,220,961	1	1	1
Payroll, construction workers.....	4,628,365	3,151,047	1,866,480	1	1	1
Payroll, other employees.....	1,021,627	641,635	354,878	1	1	1
First quarter payroll, all employees.....	1,260,340	(NA)	(NA)	1	(NA)	(NA)
Employer costs for fringe benefits.....	1,127,452	(NA)	(NA)	1	(NA)	(NA)
Legally required expenditures.....	517,134	(NA)	(NA)	1	(NA)	(NA)
Voluntary expenditures.....	610,318	(NA)	(NA)	1	(NA)	(NA)
All business receipts.....	14,942,069	9,608,035	5,999,559	1	1	1
Total construction receipts.....	14,666,431	9,448,881	5,891,241	1	1	1
Receipts for work subcontracted in from others.....	7,143,335	3,933,188	2,389,772	1	1	1
Other business and land receipts.....	275,638	159,154	108,514	2	2	2
Net construction receipts.....	14,355,407	9,229,369	5,769,450	1	1	1
Value added.....	9,016,415	5,796,631	3,449,512	1	1	1
Selected payments.....	5,925,654	3,811,404	2,549,658	1	1	1
Materials, components, and supplies.....	5,418,101	3,591,892	2,428,363	1	1	1
Construction work subcontracted to others.....	311,024	219,512	121,973	2	3	4
Selected power, fuels, and lubricants.....	196,529	(NA)	(NA)	1	(NA)	(NA)
Electricity.....	28,917	(NA)	(NA)	1	(NA)	(NA)
Natural gas.....	9,197	(NA)	(NA)	3	(NA)	(NA)
Gasoline and diesel fuel.....	143,951	(NA)	(NA)	1	(NA)	(NA)
Lubricating oils and greases.....	10,433	(NA)	(NA)	2	(NA)	(NA)
Other.....	4,032	(NA)	(NA)	4	(NA)	(NA)
Rental payments for machinery, equipment, and structures.....	108,758	(NA)	(NA)	1	(NA)	(NA)
For machinery and equipment.....	62,329	38,028	15,202	1	3	2
For structures.....	46,429	(NA)	(NA)	1	(NA)	(NA)
Selected purchased services.....	183,439	(NA)	(NA)	4	(NA)	(NA)
Communication.....	76,382	(NA)	(NA)	3	(NA)	(NA)
Repairs to structures and related facilities.....	14,978	(NA)	(NA)	3	(NA)	(NA)
Repairs to machinery and equipment.....	92,080	(NA)	(NA)	5	(NA)	(NA)
Capital expenditures.....	322,130	126,739	70,720	1	2	2
New.....	263,316	103,652	58,680	1	2	2
Structures and related facilities.....	35,823	18,568	11,353	6	4	4
Machinery and equipment, including automobiles and trucks.....	227,493	85,084	47,327	1	2	1
Automobiles and trucks intended primarily for highway use.....	151,342	(NA)	(NA)	1	(NA)	(NA)
Used.....	58,814	23,087	12,016	4	3	4
Structures and related facilities.....	13,496	7,003	5,340	8	6	6
Machinery and equipment, including automobiles and trucks.....	45,319	16,084	6,675	4	4	3
Fixed assets and depreciation:						
Cross book value of depreciable assets at end of year.....	1,635,701	860,171	(NA)	1	1	(NA)
Accumulated depreciation at end of year.....	798,946	404,941	(NA)	1	2	(NA)
Net value of depreciable assets at end of year.....	836,755	455,230	(NA)	1	1	(NA)
Depreciation charges during year.....	172,328	99,412	(NA)	1	3	(NA)
Structures, additions, and related facilities:						
Cross book value of depreciable assets at end of year.....	412,062	227,675	(NA)	2	2	(NA)
Accumulated depreciation at end of year.....	142,889	65,204	(NA)	2	2	(NA)
Net value of depreciable assets at end of year.....	269,174	162,471	(NA)	2	2	(NA)
Depreciation charges during year.....	22,941	15,026	(NA)	2	6	(NA)
Machinery and equipment:						
Cross book value of depreciable assets at end of year.....	1,223,639	632,496	(NA)	1	2	(NA)
Accumulated depreciation at end of year.....	650,058	339,737	(NA)	1	2	(NA)
Net value of depreciable assets at end of year.....	567,581	292,759	(NA)	1	2	(NA)
Depreciation charges during year.....	149,388	84,386	(NA)	1	3	(NA)

¹Includes data for power, fuels, and lubricants, now shown separately.

Table 2. Construction Receipts for Establishments With Payroll by Type of Construction: 1977 and 1972

(Thousands of dollars. Detailed figures may not add to totals because of rounding. For meaning of abbreviations and symbols, see text)

Item	Electrical work special trade contractors (1731)		Standard error of estimate (percent)	
	1977	1972	1977	1972
Construction receipts.....	14,666,431	9,448,881	1	1
Building construction.....	10,679,738	7,892,541	1	1
Single-family houses.....	1,712,289	1,181,759	2	2
Apartment buildings.....	735,688	847,989	1	2
Other residential buildings.....	274,279	249,740	2	3
Industrial buildings and warehouses.....	3,287,002	2,137,475	1	1
Office and bank buildings.....	1,428,973	1,056,748	1	1
Stores, restaurants, public garages, and automobile service stations.....	978,801	647,592	1	2
Religious buildings.....	165,760	120,748	2	3
Educational buildings.....	832,468	836,640	1	2
Hospitals and institutional buildings.....	945,611	624,847	1	1
Amusement, social, and recreational buildings.....	141,207	114,267	3	3
Other nonresidential buildings.....	177,663	74,736	3	6
Nonbuilding construction.....	2,785,543	1,189,960	1	2
Highways, streets, and related facilities.....	305,976	199,957	2	2
Power and communication transmission lines, towers, and related facilities.....	1,191,793	360,676	1	4
Blast furnaces, petroleum refineries, and chemical complexes.....	231,483	125,381	2	2
Power plants.....	370,007	209,071	1	1
Sewage treatment and water treatment plants.....	282,108	94,726	1	4
Other nonbuilding construction.....	404,176	200,149	1	3
Construction work not specified by kind.....	1,201,435	366,380	2	5

Note: See text for explanation of duplication.

This report does not include figures for separate administrative offices, warehouses, garages, or other auxiliary units which service construction establishments of the same company. Data for separate central administrative offices and auxiliaries are collected in the enterprise statistics survey, a part of the economic censuses.

This report is one in a series presenting preliminary data collected in the 1977 Census of Construction Industries. The universe for this census included all establishments classified in the construction industries (SIC's 15, 16, 17, and 6552). This report will be superseded by a more detailed final report. In addition to data for establishments with payroll presented here, the final Industry Summary report and the reports in the Geographic Area Series will present limited data for construction establishments with no payroll during 1977.

The totals of construction receipts reported by all construction establishments in each of the several industry, State, or other groupings in this census contain varying amounts of duplication, since the construction work (and the receipts) of one firm may be subcontracted out to other construction firms and, therefore, will be included in the subcontractor's receipts. To avoid this duplication, a "net construction receipts" figure has been derived by subtracting the payments made for construction work subcontracted to others from the construction receipts.

Usually, "value added" is the best measure for comparing the relative economic importance of industries or areas. It eliminates the duplication in receipts because of subcontracting. It also eliminates from the output measure the cost of materials, which differs in relative importance among areas and industries. For this census, "value added" is equal to all business receipts less payments for construction work subcontracted to others and payments for materials, components, supplies, and fuels. However, for industries for which land receipts are significant, "value added" is equal to all business receipts less land receipts, payments for construction work subcontracted to others, and payments for materials, components, supplies, and fuels.

The symbols in the tables mean:

- Represents zero.
- D Withheld to avoid disclosing figures for individual companies; figures are included in higher level totals.
- S Withheld because estimates did not meet publication standards on the basis of either the associated standard error or a consistency review.
- Z Standard error of estimate is greater than zero but less than 1 percent.
- a Sampling error is greater than 40 percent.
- NA Not available; data were not collected.

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